The ferns and flowering plants of Nantucket—XV

EUGENE P. BICKNELL

SOLANACEAE

PHYSALODES PHYSALODES (L.) Britton.

Nicandra physalodes (L.) Pers.

Waste lots and yards on the eastern side of the town. Still in full flower late in September, 1899. At Edgartown, Martha's Vineyard, I have seen it in bloom as early as July 1 and as late as October 12.

*PHYSALIS HETEROPHYLLA Nees.

Siasconset, a few sterile plants in a mowed field, September 16, 1899.

*PHYSALIS PRUINOSA L.

In waste ground, scarce and undoubtedly introduced. Mrs. Flynn has sent me for examination specimens collected by her August 25, 1904, in early bloom, and October 2, 1902, in flower and fruit. On Martha's Vineyard and on Chappaquiddick Island, it is frequent as a garden weed and in soil that has been under cultivation, but I saw it nowhere in surroundings that at all conveyed the suggestion that it might be indigenous. Identification of this and the foregoing species confirmed by Dr. Rydberg.

Note.—Mr. Floyd has informed me that Mr. Dame, in a letter to Mrs. Owen, reported that *Physalis peruviana* L. had appeared at Gibb's swamp in several flourishing colonies in 1895, after an extensive brush fire. No specimens are known to have been preserved.

SOLANUM NIGRUM L.

Frequent by street sides and in waste places in and near the town and occasional in other parts of the island; sometimes in the rubbish back of pond shores. Plants very small June 17, 1910, first flowers June 27; remains in flower through September. Common on Martha's Vineyard.

The more usual form of this plant on Nantucket is only slightly pubescent, and has more or less zig-zag and wing-angled stem and branches; the leaves are ovate to lanceolate, often rhombic and attenuate, cuneately narrowed into rather short petioles, and entire to openly low sinuate or irregularly dentate, usually with acutish teeth, the lower surface minutely appressed pubsecent; inflorescence subumbelliform, the flowers 2–6, on strigillose pedicels; corolla white, yellowish-green at the center; calyx lobes ovate-oblong to oblong, becoming 2–3 mm. long, loosely spreading or recurved in fruit; anthers 1.5–2 mm. long, the filaments slightly pubescent; ovary pubescent; style not protruding; berry becoming over 1 cm. in diameter; seeds 1.5 mm. broad. On Martha's Vineyard I have collected a much smaller variety, reduced and more delicate in all its parts; also a larger form, with purplish-tinged flowers.

***Solanum peregrinum** sp. nov.

Similar to *Solanum nigrum*, duller green, rather low, branched from the base, the stem and branches slightly if at all zig-zag, somewhat angled but not winged, roughish with scattered incurving hairs or, above, like the younger parts of the plant, clothed with a whitened strigose pubescence; leaves rather strongly venose, thinly roughish pubescent on both surfaces with loosely appressed hairs, the veins strigose; blades broadly ovate, obtuse, abruptly contracted to slender petioles, sometimes slightly cordate or subhastate, prevailingly deeply dentate with prominent, often regular, obtuse or rounded teeth; inflorescence corymbiform, the flowers six to nine, on finally reflexed strigose pedicels; corolla white, 3–4.5 mm. long, the lobes ovate-oblong, obtuse, densely pubescent on the outer surface, finally recurved; calyx lobes short, 1–1.5 mm., broadly ovate or triangular, usually only obscurely veined, loosely spreading in fruit; anthers pale yellow, 2–2.5 mm. long, the filaments bearded, 1 mm. or more in length; ovary densely white pubescent; style slightly exserted; berry black, becoming 8 mm. in diameter, the seeds 2 mm. broad.

Street sides and waste places in Nantucket where it is rather more common than *S. nigrum*, at least in the town; Surfside; Siasconset. In full flower July 14, 1912; continues in bloom through September. Not seen on Martha's Vineyard. Type: Nantucket street, September 12, 1899, deposited in the herbarium of the New York Botanical Garden.

This plant is evidently introduced on Nantucket and its native habitat is unknown. Whatever may be its history there seems little reason to doubt that it has been included in the species *Solanum nigrum*. Nevertheless I have not found that its characters properly correspond with those of any one of the numerous varieties that have been described of this wide-ranging and polymorphic species. Among the extensive series at the New York Botanical Garden the following are to be referred to *S. peregrinum:*

MONTANA: Columbia Falls, September 17, 1894, R. S. Williams. FLORIDA: Pensacola, August 6, 1901, A. H. Curtiss, "No. 6863, Second distribution of plants of the Southern States," labeled "*S. nigrum* var. *Dillenii*," a very different plant. SWITZERLAND: August 28, 1897, S. L. Clarke.

Solanum nigrum, as now generally accepted, is unmistakably a composite species, and in the subdivision which it must sometime receive the precise application of the collective name will be a matter for very critical determination. The ordinary Nantucket form agrees closely with the description of "true *S. nigrum*" as understood by Dr. Gray.* From this *S. peregrinum* is clearly distinct showing obvious differences throughout—duller green color, coarser pubescence, straighter and less angled stem and branches, shorter and broader, deeply dentate-lobed leaves, the blades abruptly contracted into longer petioles, corymbiform instead of umbelliform inflorescence, broader divisions of the corolla, larger anthers, bearded filaments, shorter calyx lobes, larger seeds.

Comparison of *S. peregrinum* with the type of *S. interior* Rydberg† shows it to be quite distinct from that western species.

SOLANUM DULCAMARA L.

Neglected places in the town; cedar thicket at Monomoy; among pines near Miacomet Pond; the Thorn lot and at several stations on the western side of the island. First flowers June 28, 1912; in full bloom June 15, 1910; late flowers and well fruited September 10, 1907.

LYCIUM VULGARE (Ait. f.) Dunal.

Occasional in waste ground and along fences in and near the

* Syn. Fl. 2[1]: 227–228.

† Bull. Torr. Club 31: 641, 1905.

town, and at one place on the harbor shore. In full flower May 30, 1909, June 15, 1911, mid-September, 1899.

DATURA STRAMONIUM L.

Infrequent and apparently never of very strong growth on Nantucket. A few small plants at Siasconset, below the bluff, in 1899, 1904, 1912; small plants by the railroad in Nantucket, 1904; waste ground south of the town September 16, 1907, in full flower.

*DATURA TATULA L.

One small plant in a town barnyard September, 1899; a solitary plant by a streetside in full flower August 10, 1906.

Note.—Petunia axillaris (Lam.) B. S. P. is occasionally to be seen as a transient waif in the town streets.

SCROPHULARIACEAE

VERBASCUM THAPSUS L.

Nowhere abundant, but scattered over the island in dry open places. Spikes beginning to show June 18, 1908; first flowers June 26, 1910, June 28, 1912.

*VERBASCUM PHLOMOIDES L.

Two stout plants together on a bank at Siasconset, June 13, 1908, in full flower, thus earlier blooming by over two weeks than the closely related *Verbascum Thapsus*.

VERBASCUM BLATTARIA L.

Seen only in a grassy yard on North Water Street, September 10, 1907, a number of fruiting plants, and two still in bloom, their flowers white. Mrs. Owen has recorded it from a single station in Nantucket and from Siasconset. It is thus not less scarce today than it was thirty years ago, and is one of a number of common and widely distributed weeds that on Nantucket do not seem to find conditions favorable to their spread.

*CYMBALARIA CYMBALARIA (L.) Wettst.

Linaria Cymbalaria Mill.

Established along old walls at several places in the town. Just in bloom June 16, 1911; in full flower June 5, 1912.

LINARIA LINARIA (L.) Karst.

Linaria vulgaris Hill.

Another one of our common weeds that does not make headway on Nantucket. I have met with it there on only three occasions: in 1899, at Siasconset, a few plants together; in 1904, a single patch on the south shore at the site of the old Surfside hotel; and in 1912, by the Wauwinet road in Squam, a small colony in full flower July 12. As far back as 1888, Mrs. Owen reported it as "not infrequent on the edge of the town," where today, if it has not died out entirely, it must be extremely scarce. It occurs on Tuckernuck and is frequent on Martha's Vineyard, but seems to be absent from Chappaquiddick Island.

LINARIA CANADENSIS (L.) Dumort.

One of the common plants of sandy and sterile soils. First flowers May 30, 1909, June 4, 1911; in full flower June 7, 1908; continues to bloom well into September.

*SCROPHULARIA LEPORELLA Bicknell.

Scarce. In September, 1899, a colony of some twenty plants, the tallest nearly five feet high, grew at the border of a thicket in Squam. Five years later, and many times since then, this station was searched for in vain; probably none of the plants had survived the encroachment of the woody growth that had at first given them protection. Not until 1910 was the species seen again when two spindling flowerless plants were found at Watt's Run. The next year much of it, in full flower on June 9, raised its tall stems along a low shore thicket in Quaise, and on July 5, 1912, a group of some fifteen plants were in full flower in low open ground near Miacomet Pond. Collected in a yard on West Silver street July 1, 1911, by Miss Grace B. Gardner. It occurs on Martha's Vineyard, there being two stations on Chappaquiddick Island.

It is interesting that the wide variation in leaf form to which this species is subject may be seen in its extremes in the small and isolated colonies found on Nantucket. In plants rising side by side the leaves of one may be evenly close-serrate, of the other coarsely and irregularly laciniate, or even doubly laciniate, with salient triangular to lanceolate-attenuate teeth. Even this ragged-

ness of outline may be sharply accentuated by a more prominent tooth here and there standing forth quite out of line with its fellows either at right angles to the axis of the leaf or actually recurved.

The plants of these coastal islands compared with those of more hilly country inland show a marked tendency toward a different form of corolla, the tube wider, even campanulate, with its upper lip abbreviated and with short rounded lobes, much like that of the western *S. occidentalis*, to which this species is evidently very closely related.

GRATIOLA AUREA Muhl.

Abundant on wet shores and in low grounds, as well as in many fresh water ponds, where it develops after the manner of a true aquatic producing lengthened and attenuate semi-pellucid leaves. Young plants beginning to appear May 30, 1909, and June 8, 1910; mostly less than one inch high June 17, 1910; in full flower August 7, 1906, and until after the middle of September. On Martha's Vineyard I have seen it in flower as early as June 26 (1913) and as late as October 8 (1909).

ILYSANTHES DUBIA (L.) Barnhart.

Ilysanthes gratioloides Benth.

Infrequent. Shores of Sachacha Pond; at several stations near Siasconset; Maxcy's Pond; pool on Madequet road. Still in flower September 12, 1907, September 16, 1899.

LIMOSELLA TENUIFOLIA Hoffm.

Abundant on the wet sandy shores of ponds on the south side of the island, especially Hummock Pond; also at Sachacha Pond. Here, and at Miacomet Pond, it may be seen growing beneath the water with elongated attenuate leaves, some of them 10 cm. or more in length. Ordinarily the leaves are mostly 2–4 cm. long and very narrowly linear, either obscurely spatulate or tapering to an obtuse tip. Not yet in flower May 31, 1909; in full flower June 17, 1908, continuing in bloom through September.

*VERONICA OFFICINALIS L.

A small patch in full flower on a lawn on Main Street, June 16, 1911, doubtless introduced.

*VERONICA SERPYLLIFOLIA L.

Infrequent and possibly introduced. Damp fields westward from the town at several stations; Grove Lane; Crooked Lane; Millbrook swamp. In full flower May 31, 1909, June 11, 1911.

*VERONICA PEREGRINA L.

Apparently of very recent introduction. It grew in profusion in a neglected yard at the Springfield House, June 11, 1911, in flower and fruit, but has not been seen anywhere else.

VERONICA ARVENSIS L.

Frequent by streetsides in the town; abundant on a lawn on North Water street, 1910; dry open thickets in Shawkemo, Polpis, and Millbrook swamp. In full flower May 30, 1909, June 7, 1908, June 27, 1910.

*VERONICA TOURNEFORTII Gmelin.

Near Sea Cliff Inn, June, 1893, Mrs. Mabel P. Robinson; Brant Point road "abundant and seemingly established" 1896, Mrs. Maria L. Owen, fide F. G. Floyd.

*VERONICA TEUCRIUM L.

Grove Lane, one plant, 1897, Miss Elizabeth S. Kite, fide F. G. Floyd. An estray from farm house gardens at several places on Chappaquiddick Island. In full flower in September.

*AUREOLARIA PEDICULARIA (L.) Raf.

Gerardia pedicularia L.

A colony of scattered plants in full flower September 16, 1899, in an open growth of scrub oak a mile or more northeast of Siasconset. I have not seen it since on Nantucket, although it is locally common on Chappaquiddick Island, where it continues in bloom sometimes to the middle of October. Doubtless referable to Dr. Pennell's variety *caesariensis*, although no specimens are now at hand for verification.

AGALINIS PURPUREA (L.) Britton.

Gerardia purpurea L.

Common in low grounds, either in damp soil, fresh or brackish, or on dry sandy levels, blooming in August and September and later. The corolla varies much in size and is largest and most pubescent in stout and somewhat fleshy horizontally wide branched

plants of brackish soils which also develop relatively large broadened capsules; the largest corollas seen were 3.8 cm. long and of equal width.

*AGALINIS PAUPERCULA (A. Gray) Britton.

Gerardia paupercula Britton.

Flowering specimens collected August 16, 1906, in damp places in the hills south of Polpis, have been determined by Dr. F. W. Pennell. I met with it nowhere else on Nantucket where it can scarcely be other than a scarce and local plant.

AGALINIS MARITIMA Raf.

Gerardia maritima Raf.

Locally common in many salt marshes along the north shore of the island; the Creeks; Swain's Neck and Bache's Harbor; Eatfire; Pocomo; Coskaty; Little Neck. Blooms in August and September.

***Agalinis acuta** Pennell, sp. nov.

"Annual. Plant light green, not tending to blacken in drying. Stem 1–4 dm. tall, simple or moderately branched, rather conspicuously striate four-angled. Leaves opposite, linear, slightly to moderately scabrous above; those of the stem 1–2.5 cm. long, 0.6–1.3 mm. wide. Pedicels slender, in flower 5–15 mm. long, in fruit 12–20 mm. long, 1–2(–3) times the length of the bracts. Calyx-tube 3 mm. long, evidently reticulate-veiny (firmer in texture than in *A. decemloba*), ⅔–¾ the length of the capsule, its lobes 0.5–1 mm. long, triangular-acuminate, not or scarcely callose. Corolla 10–13 mm. long, membranous, its tube 7–9 mm. long, its lobes 3–4 mm. long, retuse to emarginate, all spreading; within pubescent below sinus and over entire width of basal portions of posterior lobes; posterior lobes ciliate, anterior finely ciliolate; "rose-pink" (not seen fresh). Filaments lanose toward apex, anterior more densely so; anther-sacs lanose with white hairs on the valvular surface, glabrous on the sides. Style glabrous. Stigma 1–1.2 mm. long. Capsule 3.8–4.2 mm. long, ovoid, yellowish-brown. Seeds 0.4–0.6 mm. long, triangular-rounded, turgid, yellowish-brown; testa finely reticulated.

"Type: dry sandy downs, Edgartown, Martha's Vineyard, Massachusetts, collected in flower September 12, 1901, M. L. Fernald, 45 in United States National Herbarium; cotypes in Gray Herbarium and Herbarium New York Botanical Garden.

"Flowers, late-August to October. Fruit, late-September to October. Dry sandy soil, rare or locally frequent in the Coastal Plain, Cape Cod region of Massachusetts, Nantucket, Martha's Vineyard and Long Island, westward as far as the Hempstead Plains; very occasional inland (above the Fall-Line) in eastern Massachusetts, Rhode Island and Connecticut.

"Differs from *Agalinis decemloba* (Greene) Pennell, which occurs from Lancaster County, Pennsylvania, to northern Alabama, by its lower habit, pedicels mostly 1–2 (not 2–3) times the length of the bracts, calyx-tube campanulate (not hemispheric), firmer in texture, $\frac{2}{3}$–$\frac{3}{4}$ (not $\frac{3}{5}$–$\frac{2}{3}$) the length of the capsule, calyx-lobes 0.5–1 mm. (not 0.05–0.2 mm.) long, not or scarcely callose, and its seeds smaller, 0.4–0.6 mm. (not 0.6–0.8 mm.) long, strongly (not obscurely) reticulated.

"Differs from *Agalinis Skinneriana* (Wood) Britton, which occurs from the St. Clair River, southwestern Ontario to eastern Kansas, by its less conspicuously striate-angled stem, angles glabrous or nearly so (not scabrellous-roughened), its corolla-lobes more or less emarginate (not truncate), stigma 1–1.2 mm. (not 1.5–2 mm.) long, capsule 3.8–4.2 mm. (not 4–5 mm.) long, and seeds smaller, 0.4–0.6 mm. (not 0.7–0.9 mm.) long." *Francis W. Pennell.*

A characteristic autumn-flowering plant of the dry plains in the southern half of the island; on the north side observed only in Pocomo. In full flower September 2, 1904, continuing in bloom through the month. Common also on the south side of Martha's Vineyard and on Chappaquiddick Island. Well grown plants become much branched and 3 dm. in height; diminutive examples may be not over 2 cm. high with only a terminal flower.

Comparison of Nantucket specimens collected in 1904 with Wood's type of *Gerardia Skinneriana* in the herbarium of Columbia University, to which species the New England plant had long been referred, showed that they were not at all the same; and when, through the kindness of Professor Greene, I received specimens of his then recently described *Gerardia decemloba*, from Washington, that more nearly related plant was readily seen not to be identical. Dr. Pennell's studies in this group have brought him quite independently to the same conclusion, and have shown further that our eastern plant, and *A. decemloba* as well, are

distinct from the more southern *Agalinus parvifolia* (Chapm.) Small, to which both had been recently referred.

SCHWALBEA AMERICANA L.

Mrs. Owen's catalogue contains the record of all that is known of this plant on Nantucket: "Plains opposite Bloomingdale; rare, L. L. D. Plants of luxuriant growth but few in number." It has never been reported by any other collector than Mr. Dame.

PEDICULARIS CANADENSIS L.

Frequent in dry thickets and open ground throughout the eastern side of the island from Pocomo and Squam to Siasconset; Quaise; near Madequecham Pond. Observed in full flower from June 4 to 15.

MELAMPYRUM LINEARE Lam.

An inhabitant of dry thickets and copses on the eastern side of the island from Shimmo and Shawkemo to Squam and Siasconset. Just in flower June 2, 1909, June 7, 1908; still in bloom July 11, 1912.

LENTIBULARIACEAE

UTRICULARIA MACRORHIZA LeConte.

U. vulgaris var. *americana* A. Gray.

Reed Pond; Maxcy's Pond; pool west of the town; reported from Polpis by Mrs. Owen. In flower at Reed Pond June 8, 1908, June 18, 1910, July 3, 1912, September 10, 1907.

UTRICULARIA GEMINISCAPA Benj.

U. clandestina Nutt.

In a ditch on Swain's Neck, also in Polpis; not seen in flower. "Ditches in Polpis choked with it." M. L. O. catalogue.

UTRICULARIA INTERMEDIA Hayne.

"A single non-flowering specimen in Reed Pond. Morong, 1887." M. L. O. catalogue.

SETISCAPELLA SUBULATA (L.) Barnhart.

Utricularia subulata L.

Taupawshas swamp in open places among masses of cranberry, both in wet spots and in merely damp soil, July 6, 1912, just in flower. Reported by Mrs. Owen in her catalogue from Tom

Never's and Gibb's Ponds, where it was collected by Mr. Walter Deane (see Rhodora, 6: 160).

SETISCAPELLA CLEISTOGAMA (A. Gray) Barnhart.

Utricularia cleistogama Britton.

Mrs. Owen, in her catalogue, has reported her discovery of this diminutive plant on Nantucket, where she had found it in abundance in a part of Tom Never's swamp and also at Almanac Pond. Flowering specimens, sent by Mrs. Owen, as I am informed by Professor Fernald, are preserved in the Gray herbarium together with a letter from their collector dated August 28, 1881. The citation of the plant from Nantucket in the sixth edition of Gray's manual evidently rests on this material.

Although now held to be a species distinct from *S. subulata* it cannot be said of this plant that it is yet conclusively known to be anything more than a reduced state of that species. Whatever the truth may be the two plants do not always show that wide diversity in their corollas that, by comparison of typical examples, does undoubtedly seem to attest them as distinct. Near Edgartown, on Martha's Vineyard, on September 30, 1912, there fell to me a most favorable opportunity of observing the extent of variation natural to the flowers of *S. cleistogama* among the plants of a single colony. The situation was a few square feet of damp sandy soil in open ground. In the weakest examples, some of them not over 1 cm. high, the corollas, "not larger than a pinhead," were subglobose or saccate, and white or faintly bluish in color, precisely as descriptions require them to be. But in stronger plants the corollas increased doubly in size and came also, by an exact gradation, to a distinctly two-lipped form, the blunt lower lip dusky or purplish lineate and with an evident white spur, the most open flowers showing an unmistakable yellowish tinge. The spur, obsolete in the smallest corollas, varied in the larger ones from rounded to oblong and acutish; in one instance it was bifid.

In very small examples of *S. subulata*, unmistakable as to identity because components of colonies of the typical plant, the corolla, perhaps from arrested development, may be somewhat abortive and reduced to a fraction of its normal size, and is sometimes palest yellow, or even whitish with a faint bluish tinge.

Such plants were collected on Martha's Vineyard, near Lambert's Cove, July 1, 1913.

OROBANCHACEAE

*THALESIA UNIFLORA (L.) Britton.

Orobanche uniflora L.

Probably not uncommon, although not previously reported from Nantucket. On June 4, 1909, when it was in full flower and therefore easily noticeable it was found along the foot of Rattlesnake bank, and also by a low thicket in Shawkemo and on an open sandy hillside eastward towards Polpis.

Note.—The beech-drops, *Leptamnium virginianum* (L.) Raf., grows in association with almost all the groups of beech trees on Chappaquiddick Island, and is abundant at several stations and of strong growth, some plants attaining a height of 5 dm. On Nantucket I have never missed an opportunity of seeking it wherever beech trees were seen but always without success. It seems altogether probable, however, that some day it will be discovered there.

BIGNONIACEAE

*CATALPA CATALPA (L.) Karst.

Catalpa bignonioides Walt.

Small trees not over three feet in height, were observed, in 1904 and 1906, scattered among an extensive growth of pines east of the town; a single small tree among introduced pines at Wauwinet, 1912.

PLANTAGINACEAE

PLANTAGO RUGELII Dcne.

Reported in Mrs. Owen's catalogue as "very scarce" and found, by Judge Churchill and Mr. Dame, only at two stations at the southern end of the town. I did not succeed in finding it until 1907 when, in September, a few flowering plants were observed in a shaded yard on Broad Street. Two years later it had become established by nearby streetsides at several places, and was also seen in a farmyard south of the town and at as far distant a point as a thicket in Shawkemo.

PLANTAGO MAJOR L.

A weed of roadsides, old fields and waste places. July to September.

*PLANTAGO HALOPHILA Bicknell.

A characteristic plant of salt marshes and brackish shores, sometimes extending along roadsides. Flowering during August and September.

PLANTAGO LANCEOLATA L.

Excessively abundant in fields and grassy places everywhere. Dark green glabrate plants and paler and narrower leaved very hairy forms, mainly of poorer soils, constitute markedly divergent varieties of this species. Forms with dark, ovate, compound heads are frequent, as well as sharply contrasting forms having the spikes linear and elongated. Blooms from May until October.

PLANTAGO DECIPIENS Barneoud.

Frequent or, locally, rather common in salt marshes and along shores, blooming from August through September.

*PLANTAGO ARISTATA Michx.

A few plants on Little Neck, September 10, 1904, in flower and fruit; near Brant Point, September 13, 1907; one plant in a waste yard June 27, 1910; a scattered growth in a dry field in Shawkemo, in full flower July 1, 1912. Abundant and evidently long established on Martha's Vineyard, and also extending all along the sandy roadway that crosses Chappaquiddick Island, but on Nantucket apparently of only recent introduction.

RUBIACEAE

HOUSTONIA COERULEA L.

Abundant throughout, not only in low moist places but also over the dry plains and commons, and to the tops of the exposed rolling hills. In the southwest quarter of the island it even overspreads the sandy wastes near the shore, in association with *Sisyrinchium arenicola*, these being the most noticeable plants flowering there in early June. In full flower May 30, 1909; it continues quite generally in bloom into July, and produces belated flowers in August and even in September.

Large flowered forms having white, brightly yellow-eyed corollas, with relatively short, evenly graduated tube, seem to answer quite exactly to the description of var. *Faxonorum* Pease & Moore.

HOUSTONIA LONGIFOLIA Gaertn.

Recorded by Mrs. Owen from "near Long Pond. L. L. D[ame]." No other collector has reported it. About Long Pond are conditions of soil and surroundings suggestive of localities on Long Island where this is a characteristic plant, but I have not succeeded in rediscovering it on Nantucket where, if it occurs today, it must be of extreme rarity.

CEPHALANTHUS OCCIDENTALIS L.

A common shrub of wet swamps and the borders of muddy ponds. Leaves appearing June 7, 1911, June 8, 1908; flower heads less than half size July 4, 1912; still in bloom September 10, 1907.

MITCHELLA REPENS L.

A scarce plant on Nantucket where I have met with it only twice. In 1910 a small patch was discovered in a dense thicket near the head of Tom Never's swamp, and a few plants in a secluded spot at Beechwood, in Polpis. It had not flowered at either station. Mrs. Owen has reported it from Trot's swamp and from Polpis.

*GALIUM ERECTUM Huds.

On Grove Lane, June 28, 1912, a large mass in full flower.

*GALIUM APARINE L.

Everywhere in shaded thickets on banks and in low grounds. In full flower May 30, 1908, May 31, 1909; well fruited June 28, 1912; by midsummer only the withered stems are to be found. Varies remarkably in proportions and in the size of the leaves and fruit.

GALIUM PILOSUM Ait.

Frequent, especially in the northwestern quarter of the island. Not yet in flower June 26, 1910; past flowering and with mature fruit September 2, 1904. Varies from densely pubescent to almost glabrous, the more pubescent forms occurring in exposed

sandy places and in pure sand. The glabrate plants are not common and are found in more protected situations among open growths of scrub pines. Their stems are shining and sometimes quite glabrous, their leaves hispidulous ciliate on the margins and on the midrib beneath, var. *puncticulosum* (Michx.) T. & G.

GALIUM TRIFLORUM Michx.

Frequent in shaded thickets on the eastern side of the island, especially in Squam, Shimmo and Polpis. In full flower and with young fruit August 13, 1906. As elsewhere two forms may be distinguished, the leaves of one narrow and tapering, of the other broadened and rounded or abruptly narrowed to the cuspidate apex.

GALIUM CLAYTONI Michx.

Common in low grounds flowering from the middle of June through September.

The ordinary form of this bedstraw is a small plant of damp or wet open places often where the soil loses much of its moisture or becomes quite dry in summer. In partial shade, or in very wet situations, which encourage a vigorous growth throughout the season, it comes to an enhanced phase of development that gives it quite the aspect of being a different species. Nowhere have I seen this larger state of the plant of more pronounced character than on Nantucket.

The more common smaller form of the plant is very scabrous and of a pale green color, not readily discoloring when pressed; the leaves are often firm with revolute margins, those of the stems sometimes reduced to fours and only 8–10 mm. long and 1–2 mm. wide; the minute flowers of three- or, not rarely, four-parted corollas, are in pedunculate clusters of three on short finally divergent pedicels 2–5 mm. long, and the fruit is 1 mm. or less in diameter. The larger form is only slightly scabrellous and is thin leaved and deeper green in color, turning dark or black on the herbarium sheet. In its luxuriance of growth along ditches and in very wet spots it sometimes forms close masses 6 dm. or more in height, from which it is possible to disentangle individual plants as much as 13 dm. in length. The leaves, in whorls of six on the stems and four on the branches, are narrowed into evident petioles, and be-

come as large as 3 cm. long and 6 mm. wide; the corolla, 1.5–2 mm. in expanse, is four-parted or, in smaller flowers, three-parted, the lobes either acute or obtuse; the fruit 1–1.5 mm. in diameter, is borne on slender spreading pedicels sometimes fully 12 mm. in length which are disposed to be arcuate and slightly scabrous. Smaller and narrower leaved plants having pedicels of this character so closely simulate *Galium trifidum* L. that they might easily be misidentified. It would be hard to believe of these divergent phases of *Galium Claytoni* that they were other than well-defined species, were it not that the gradation from one to the other is gradual and complete and did not as many examples lie midway in the range of variation as at either extreme. Almost the same extent of variation in the species may be observed on Long Island and about New York. If it be thought expedient to recognize the larger form by a name we have for it the varietal designation *Galium Claytoni* var. *subbiflorum* Wiegand (Rhodora **12**: 228–230. 1910).

It could be wished that the name *Galium Claytoni* were better accredited in its application to this plant for which we have come to use it. A careful reading of Michaux's description leaves little doubt in my own mind that his *G. Claytoni* was no other plant than the *G. trifidum* of Linnaeus. Michaux was particular to emphasize of his species that its leaves were in fours or, rarely, in fives, never in sixes, thus meeting exactly the case of *G. trifidum;* and it is further suggestive in his description that the rather ambiguous phrase "*fasciculus ramorum terminalibus*" at once becomes clear and at the same time diagnostic of *G. trifidum*, if we may understand it to mean that, except at the ends of the branches, the flowers were solitary. Upon these indications, and others not necessary now to bring forward, there would seem to be little reason to doubt that the species we have been calling *Galium Claytoni* has never received a name proper to its own identity, unless, indeed, it should bear the name *Galium tinctorium* L., now otherwise appropriated. Bigelow and some others of our earlier botanists took this view, that is to say, their descriptions make it plain that this name was understood by them as applying to the larger phase of the plant now called *G. Claytoni;* and, as a matter of fact, the description of *G. tinctorium* in Species Plantarum

undoubtedly applies better to this plant than to the species that has come to bear it, and which Bigelow described as *Galium obtusum*. It is to be hoped that there may be still in existence original specimens by which the true application of these names may be made clear.

On Nantucket the smaller form of *G. Claytoni* comes into bloom rather earlier than the larger one—June 15, 1908, June 18, 1910; the latter showed its earliest open flowers June 26, 1910.

Galium tinctorium L. (*G. obtusum* Bigelow) occurs on Martha's Vineyard and is to be looked for on Nantucket.

*GALIUM PALUSTRE L.

Abundant in the meadows about Shawaukemmo Spring, where, in June and early July, it is conspicuous from its clustered masses of white bloom about springy places and along runs and rills; also found near Abram's Point. Just in flower June 8, 1911; in full bloom June 25, 1910, July 1, 1912. Flowers cymulose clustered, the corollas spreading 2–5–4.5 mm., four-parted, the lobes acute; flower buds often purplish-pink or rose color.

Note.—Galium circaezans Michx. is included, by name only, in Mrs. Owen's list. It is not known that it has ever been collected on Nantucket.

*SHERARDIA ARVENSIS L.

In full flower all through the short grass of a lawn on Chester street, June 15, 1910.

CAPRIFOLIACEAE

SAMBUCUS CANADENSIS L.

Very common both in moist and in dry thickets and among the scattered patches of bayberry and mixed growth on the open plains. Not yet in bloom June 27, 1910; cymes whitening June 30, 1912, the first open flowers July 4, in showy bloom July 10; still some flowers August 4, 1906; fruiting well September, 1907.

VIBURNUM DENTATUM L.

In swampy thickets, as well as in dry places, and even in pine barrens; often growing with *V. venosum*, but much less abundant and blooming somewhat earlier. Cymes close and green June 7, 1908; just in flower June 22, 1910; bearing green fruit, no flowers

remaining, July 12, 1912. In the autumns when I have observed it it has fruited much less freely than *V. venosum*.

VIBURNUM VENOSUM Britton.

A noteworthy shrub of Nantucket abounding throughout in damp thickets, on dry banks and in open ground; also in pine barrens. Cymes small and green June 7, 1908; forward bushes just in flower June 30, 1912, everywhere in showy bloom July 4 to 13, and later; fruiting abundantly in September.

The leaves show great diversity of size and form, even in shrubs growing side by side, and the fruit is no less variable, sometimes globose, again oval and somewhat pointed. The largest shrubs seen measured 22 cm. around the trunk near the base and were over 3.5 m. in height. The type of this fine shrub was collected on Nantucket, September 19, 1899. It occurs also on Tuckernuck, and is much more common on Martha's Vineyard than *V. dentatum* which it replaces completely on Chappaquiddick Island.

Reported in Mrs. Owen's list under the name *V. molle* Michx.

*TRIOSTEUM PERFOLIATUM L.

Another native plant that has been found only at a single station on Nantucket—at the foot of a steep thicketed bank by a small pond near Acquidness Point. Here, on September 11, 1907, were two strong clusters not two feet apart consisting together of about twenty stems. Two years later it was seen that these plants were succumbing to the closer pressure of the investing woody growth, and in 1911, when I last visited them, one group had been reduced to three, the other to six weakened stems. In 1910 the plants had still been able to bloom, but bore flowers with light yellow corollas instead of the normal red ones they had produced in their days of vigor. Flower buds just visible June 2, 1909; nearly open June 7, 1908; in full bloom June 19, 1910.

LINNAEA AMERICANA Forbes.

Mrs. Owen says of this plant: "A patch 15–20 feet in diameter discovered in the pines in 1868 or 1869 by Mr. L. L. Dame. A patch in the pines on the South Shore road discovered in 1872 by Miss C. L. Tallant." At the latter locality the plants were seen not more than two years, and Mr. Dame looked in vain for

his plants in 1886. Mr. Floyd writes me that "Mrs. Owen told me not very long before her death that the plant still persisted at one station on Nantucket."

*SYMPHORICARPOS SYMPHORICARPOS (L.) MacM.

Symphoricarpos vulgaris Michx.

"Road opposite Barzilliai Coffin farm September 1, 1912, in full flower. Miss Grace Brown Gardner."

*LONICERA JAPONICA Thunb.

Occasional by fence rows and roadsides in the general town region, less often by fieldsides and the borders of meadows. In full flower June 27, 1912.

CUCURBITACEAE

MICRAMPELIS LOBATA (Michx.) Greene.

Occasional in waste places in and near the town. In full flower late in August.

SICYOS ANGULATUS L.

At a few places in damp lots and by fences in the town; by the railroad in Washington street.

CAMPANULACEAE

*CAMPANULA RAPUNCULOIDES L.

Occasional by street sides and in waste ground in the town, more rarely by roadsides in the suburbs. First flowers June 27, 1910, June 29, 1912; in full bloom at the end of August, 1904.

SPECULARIA PERFOLIATA L.

Rare: Acquidness Point, knoll and hillside thicket east of Shimmo farm, June 7, 1911; Rattlesnake bank, July 1, 1912. Only a few plants at each station and no petaliferous flowers.

LOBELIACEAE

LOBELIA CARDINALIS L.

A few plants along Watt's Run September 6, 1904, and much of it in flaming bloom at the same locality September 17, 1907; Quaise and Polpis, M. L. O.

Note.—Lobelia inflata L. is included in Mrs. Owen's catalogue. Nothing is known of it as a Nantucket plant at the present day, nor have I seen it on Martha's Vineyard.